LOW VISION CLINIC

For Individuals Who Are
Severely Visually Handicapped

PROJECT NO. RD-1327-SD

FINAL REPORT

Department of Social Services
Vocational Rehabilitation
and Services to the Blind Division
1901 Bachelot Street
Honolulu, Hawaii

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State of Hawaii
Department of Social Services
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1901 Bachelot Street
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PREFACE

The findings which the authors believe should be of significance to rehabilitation workers concerned with blind and visually handicapped individuals are being presented here as an introduction to the main body of the report.

With this approach, the reader, if not able or not interested in reading the report in its entirety will at least grasp some of the points of significance which emerged from our experience in the operation of the Low Vision Clinic over a three-year period.

Significant Findings for the Rehabilitation Worker

The client with the slightest vision may benefit from optical aids, provided:

> The visual condition is stabilized.
>
> The client is satisfied that vision cannot be restored by conventional aids.
>
> There are no medical or psychological findings to contra-indicate use of an aid.
>
> The client is convinced that use of his remaining vision will not result in further visual loss.
>
> The client is motivated to "see" better.

An optical aids evaluation will reveal whether or not an individual with the use of his aid can achieve improved functional use of his residual vision.

> If improved functional use can be obtained, the variety of jobs which the client can capably perform increases.
>
> Whether or not improved functional use can be obtained should be determined early in the rehabilitation process. This information can be most useful to the rehabilitation worker in guiding his client toward a realistic vocational goal.
>
> With a young child, early identification of his visual problem and exposure to optical aids may very well decide the course of his education, whether as a seeing child capable of reading print, or as a blind child dependent upon braille and other mechanical aids and appliances. Whichever path he must follow will have considerable influence on his future vocational planning.
>
> The successful fitting of an optical aid does not mean that the client is a "seeing" person in the same sense that a person using the normal prescription lenses "sees".

The optical aid does not remove the disability, it merely provides a tool for more effective job performance.

> Clients who are successfully fitted with aids tend to obtain increasing use of their vision as they adjust to their aid. Periodic re-evaluation may result in prescription of additional aids which will further increase their visual efficiency.
>
> Factors of age, duration of the visual loss, original visual levels, congenital or adventitious blindness, and occupation have little or no relation to the successful fitting of optical aids.
>
> Clients with diagnoses of aphakia, macular degeneration, and optic atrophy are more frequently referred for optical aids evaluation than those with other diagnoses. They are excellent candidates for optical aids.

Success is also obtained with clients with other types of eye conditions.

> Sustained improved visual efficiency can be least expected with clients with diagnoses of diabetic retinopathy and retinitis pigmentosa.

More severely visually handicapped clients can be aided with improvement of their near vision than their distance vision. Rehabilitation workers should request reports of near visual acuity since the distance vision alone does not accurately describe the degree of disability.

INTRODUCTION

Since 1950, Hawaii's Agency for the Blind, like many other agencies for the blind throughout the Nation, has been giving more attention to the needs of the partially seeing.

Two factors were responsible. One was the establishment of a Rehabilitation Center Program in 1951 which served both the totally blind and the partially seeing. It soon became evident that the problems facing these two groups differed, and therefore methods used in helping them resolve their difficulties should also be different.

Encouraged by the literature that was beginning to emerge with respect to making maximum use of any residual vision, Center clients with some vision were helped through the use of large print and magnifiers of various types to use their sight to perform various activities.

The second factor was the introduction of optical aids as demonstrated by the Optical Aids Services carried out at the Industrial Home for the Blind. As more of these clinics were established and more literature on the effectiveness of optical aids became available, Hawaii, too, began to think about setting up an Optical Aids Service for the benefit of Hawaii's partially seeing population. Accordingly, in 1959, the State Consultant on Services for the Blind, Department of Social Services, visited the Optical Aids Service of the Industrial Home for the Blind, and conferred with staff members of the American Foundation for the Blind. Discussion centered on personnel requirements and the latest methods, and equipment in use in existing clinics.

With this additional information and a conviction that Hawaii, too, should have a Low Vision Clinic, the consultant initiated meetings with ophthalmologists, optometrists, and officers of Lions International, District 50. All encouraged the establishment of such a service. The Lions, through the Hawaii Foundation, pledged their financial support conditioned on the future approval of an application to Vocational Rehabilitation Administration for a demonstration grant.

An Advisory Committee was formed to decide on the makeup of the Clinic team, best location for the Clinic, and procedures to be followed. Serving on the Advisory Committee were an ophthalmologist, optometrist, social worker, a lay person who was legally blind, and a physician. At the time consideration was given to the establishment of a Low Vision Clinic, plans were underway for the construction of a new Rehabilitation Center for the Blind. It seemed appropriate to the committee to include in these plans facilities for the Clinic.

In considering the composition of the team, the committee recommended the inclusion of a social worker, ophthalmologist, optometrist, internist, and a psychologist, with the social worker devoting full time to the project, and other members of the team serving the project on a part-time basis.

The Advisory Committee also recommended that fees, based on a sliding scale of $1.00 to $25.00, be charged for services. The thought behind this recom-

mendation was that payment for services would help to establish in the minds of the public, ophthalmologists, and optometrists the image of a truly professional service.

The Advisory Committee further recommended the types of trial aids and appliances, test charts, and equipment to be used in furnishing the Clinic.

With these details resolved, the Department of Social Services applied to the Vocational Rehabilitation Administration for a special demonstration grant in 1962. An award was granted to the Department of Social Services in June, 1963. Project No. RD 1327-SD finally became a reality in January, 1964.

Description of the Project

This was a three-year (January, 1964 - June, 1967) selected demonstration project following the general provisions and principles set forth in the study conducted by the Industrial Home for the Blind in Brooklyn, New York.

The project provided for the prescription and fitting of the latest devices in magnifying lenses and other aids available, to improve the visual efficiency of persons with very low vision or who were currently classified as blind, in order to increase their opportunities for employment and to broaden their social and educational horizons.

Purpose of the Project

The project was planned with the following major objectives:

1. To exploit to the fullest the available vision of all persons who have reduced acuity.
2. To apply promptly the new knowledge, methods, and techniques that have become available in recent years for improving the residual visual acuity of visually handicapped persons.
3. To combine the resources of voluntary organizations and the public program to attain the above objectives.
4. To increase substantially the number of blind and visually handicapped persons being prepared for remunerative employment.

In order that the objectives of the program might be fulfilled, the following specific activities were planned:

1. To examine clients referred to the Low Vision Clinic and to prescribe and fit the optical aids which will produce optimum functional vision.
2. To provide counseling services to facilitate the acceptance of the optical aids, and the physical and psychological accommodation to them.

Community Relationships

Since the project serves a case finding function to identify potential candidates for vocational rehabilitation services and for other services available to the visually handicapped people in the community, efforts were directed toward developing community awareness of this project and its objectives.

The members of the project staff and advisory committee representing the ophthalmological and the optometric societies discussed this project with members of their respective groups and kept them informed of its progress. Simultaneously with the start of clinic operations, brochures, accompanied by a letter briefly describing the services available through the project, were sent to all ophthalmologists and optometrists in the State.

Brochures were also sent out to the 40 some Lions Clubs in the State who, through their major project of sight conservation and services to the blind, are keenly involved with visually handicapped individuals.

Orientation to the project was routinely given to student nurses, practical nursing students, public health nurses and social workers from the Public Welfare Division of the Department of Social Services.

Two newspaper articles and a television program helped to inform the community of this project.

A number of foreign visitors, especially from the Asian countries, who are working toward advanced degrees at the East-West Center and especially those in rehabilitation nursing visited the facility through their program of orientation to community resources in this State. Others from Australia, New Zealand and Asian countries who were on study tours of health, education, and welfare programs in this country or who were attending some international conference, also spent time at the Center.

Personnel in social welfare and rehabilitation from Okinawa spent many hours observing project operations resulting in a request from Okinawa for complete information on the Low Vision Clinic for the purpose of exploring possibilities of establishing a similar service for visually handicapped people in their country.

Future of the Low Vision Clinic

The success of the project is indicated by the appropriations received from the State Government to continue the program as part of the on-going basic program for the blind.

The action taken by the State Legislature was the result of community support of the project and the personal satisfaction of the individual patients who were assisted in their daily functioning with the use of optical aids.

3. To provide services which will assist clients of the Clinic to develop and realize vocational goals appropriate to their capacities.

4. To make provision for social casework services during the period of visual and vocational rehabilitation.

5. To follow up clinic clients to determine how and to what extent optical aids contributed to their greater personal and vocational adjustment.

Case Findings

The agency is mandated to maintain a register of all blind persons in the State. A survey in 1962 of all cases registered with the agency showed that there were roughly 339 individuals out of a total of 819 registered who might benefit from the Low Vision Clinic. Since anywhere from 40-80% of those examined for aids could be helped to see better, this percentage was used to make a rough estimate of the blind population who had residual vision and who were within the age group which would most likely benefit from optical aids.

At the outset of the project, the ophthalmological reports of the total registered cases were reviewed thoroughly. The social worker initially screened out those who could not possibly benefit from aids because of their total blindness, other medical problems, mental problems, age, special circumstances, etc. The ophthalmologist then reviewed all remaining reports and further screened out those whose medical situation contra-indicated an optical aids evaluation.

The first group of patients for the Clinic came from a list of 125 individuals derived from the active caseload of the agency. This caseload was comprised of individuals in various stages of the vocational rehabilitation process, students in the school for the blind and resource classes. Other persons included in this first group were individuals placed on jobs in the past two years, including vending stand operators, and other employed blind persons.

The second group of 72 patients to be considered were made up of individuals whose ophthalmological reports indicated them to be potential candidates for the Clinic. These 72 ranged in age from 9 to 65 and had not received any service from the agency for a number of years, most of whom had been blind for many years.

The third group of patients were comprised of individuals who were referred directly by ophthalmologists and optometrists, and those who were new applicants for services of the agency. As a matter of routine, all new applicants were given information about the project and their ophthalmologist was contacted regarding possible referral to the Clinic.

In the first two groups, the social worker initiated contact with the clients to discuss their interest in optical aids, and if there was interest expressed, the individuals were encouraged to contact their respective ophthalmologist for referral to the Clinic.

OPERATIONS, METHODS AND PROCEDURES

Clinic Setting

The Low Vision Clinic is located in the State Rehabilitation Center for the Blind and Visually Handicapped. This Center is named "Ho'opono", which in the Hawaiian language means "to make things right". The Rehabilitation Center was completed in September, 1962, and operates under the State Department of Social Services. It provides activities in an environment where the skills of experienced professional personnel are used in a cooperative effort to "make things right" or as right as individual limitations will permit for the client served.

Ho'opono is located in the State's largest population center, the City of Honolulu on the Island of Oahu. It is easily accessible by public or private transportation.

The clinic, by being situated in Ho'opono, allows for related appropriate services to the blind provided by various professional staff, to be made available to clinic patients. By having all services to the blind centralized in one location, identification by the community at large is simplified.

The Beginning

Although the project was to have started on January 1, 1964 it did not get underway until April 1, 1964 because of problems of recruitment of staff and procurement of materials and equipment. However, the appointment of the optometrist was made shortly after the approved project beginning date, which gave him an opportunity to go to the mainland for orientation. He visited Low Vision Clinics in New York, New Jersey, Maryland and Illinois to observe and learn the methods and techniques used in testing low vision patients. He also visited "Designs for Vision" to learn more about various types of aids available.

Personnel

As mentioned earlier, the clinic team was composed of a social worker, ophthalmologist, optometrist, internist and psychologist. The ophthalmologist served as the technical director of the project. In addition, there was a project director who was responsible for all the administrative details and saw to it that the project followed the objectives outlined in the project narrative.

The social worker and half-time steno were assigned to the clinic five days a week.

The social worker was the project coordinator. She was responsible for processing all referrals to the clinic and for preparing patients for clinic services. She secured the eye examination reports, obtained approval from the patient's personal eye physician or optometrist for clinic services and prepared social and medical histories.

She evaluated the individual's motivation and reasons for wanting an optical aid, his understanding of the use of the aids, his existing visual situation, and his expectation for improvement. She studied his overall functioning, his ability to handle his personal needs, ability to travel, his adjustment in school or employment. She also did the initial gross testing, adaptive training and follow-up of patients who had been prescribed aids.

The half-time clerk-steno carried out the clerical and bookkeeping activities.

The full team met for an hour on Wednesday afternoons. At that time, medical examinations and social histories were reviewed and decisions made on applicants for clinic services.

The ophthalmologist, in addition to the hour he spent as a member of the team, spent a second hour with the optometrist and clinic patients. He reviewed medical findings with the optometrist and discussed the implications of the pathology.

He also examined all patients who did not have an ophthalmological examination to establish the diagnosis, and to rule out any need for medical or surgical treatment prior to accepting the patient for an optical aids evaluation.

The optometrist did the actual examination and refraction of the patient for aids. He spent four hours a week in the clinic. He prescribed and fitted the patient with various aids in consultation with the ophthalmologist.

The psychologist and internist were supporting members of the team bringing to bear their specialized knowledge on the total evaluation of the applicant for visual aid services.

Eligibility

Services were available to blind and visually handicapped children and adults, provided their ophthalmological, general medical and psychological conditions did not contra-indicate clinic services, and provided further that the social data gave indication that the applicant was genuinely motivated for improved visual efficiency.

Procedures

General Physical and Eye Examination Reports

All applicants for clinic services were required to have current general medical and eye examination reports. If these were not current or not available, the social worker made arrangements for the applicant to see his personal physician, ophthalmologist or optometrist.

After six months of clinic operation, the requirement of a general medical examination for all applicants was discontinued. The internist recommended and the Advisory Committee concurred that a

general medical examination be obtained only when the physical condition of the applicant so indicated, such as an individual diagnosed as a diabetic.

Approval

As mentioned earlier, no applicant was accepted for clinic services without the prior approval of his personal eye doctor.

The Examination

The patient was shown a variety of aids on display in a cabinet in the clinic. Their form and how they were to be used were described to him so that later if it were found that he could benefit from an aid, he could participate in its selection.

The clinic examination itself was done by the optometrist. He examined the patients at least three to four times prior to prescribing an aid.

During the first visit which usually took 45 minutes, he completed the optometric examination form gathering information directly from the patient and from his personal observations of the patient.

The optometrist checked any optical aid in the patient's possession to ascertain its effectiveness, and as a guide to the prescription of other aids.

One of the purposes of the examination was to determine which was the better eye, because with "high powers", binocular fitting was not usually possible and the better eye was fitted with the aid.

An accurate pupillary distance measurement was taken initially since a binocular aid, if not decentered properly, produces double vision and is intolerable. The visual acuity was then taken, each eye separately, then binocularly, with and without old glasses, both at far and at near distances. Since most low vision patients were unable to see at a 20-foot distance, the testing distance was usually 10 feet or closer using the Sloan Chart which has finer gradation than the usual Snellen Chart.

The external examination of the eye and the ophthalmoscopy were performed in the presence of the ophthalmologist to determine the extent of ocular damage. If any active pathology existed, the patient was referred back to his ophthalmologist for medical care.

A retinoscopy was performed as the objective test to determine the extent of the refractive error. A subjective test was done next to refine the retinoscopic findings. This subjective test included the use of cylinders, pin-hole discs, stenopaic slits, fan dial test, red-green test, and other tests as needed.

The optometrist then used different powered telescopic lenses, each eye separately, then binocularly wherever applicable to determine the best acuity for distance.

During the second visit, both the objective retinoscopy and the subjective test were rechecked and refined. The near point test was done next. Whenever possible, high plus lenses were used, either in bifocal or in single vision form. When this was inadequate, microscopic lenses, either in single lens or double lens construction, were attempted.

Fitting the Aid

Different microscopic aids with different powers were used to determine the best aid for the patient's specific needs, taking into consideration the patient's working distance, and the weight and appearance of the microscopic aid.

During the third visit, findings taken for the near-point tasks were refined. The patient was then tested for near point material with various hand magnifiers, either in conjunction with their near-point glasses, or in place of them. Different types of clip-ons were also attempted over their reading glasses.

If at this point the patient was uncertain of the clarity of the aid or its practical value, he was given a loaner for use at home or at his employment. After one or two weeks of trial, another type of optical aid was substituted if the first proved unsatisfactory, and the trial period extended.

Patients who had difficulty in using the aids were scheduled for trial periods with the social worker. These trial periods were scheduled between clinic visits to give the patient the opportunity to use the aids under supervision. Patients needed understanding, encouragement and reassurance that their use of vision (especially holding reading material close to their eyes) was not detrimental and would not result in further loss of vision. They needed to be taught the proper and most comfortable method of reading. They needed to be shown that visual efficiency could be improved with practice and with adequate lighting.

During the trial period, the social worker consulted frequently with the optometrist and the ophthalmologist as indicated to inform them of the progress of the patient and to consider any recommendation for the patient.

When the patient was satisfied that the aid would be beneficial to him and the optometrist determined that the patient was able to use the aid, measurements for the final prescription were taken and the aid ordered from the optical company.

During the fourth visit, the optometrist verified the completed prescription. The glasses were then dispensed and necessary adjustment made for comfort and for optical alignment. The patient was taught the best way to use the visual aid, especially in regard to proper lighting and reading distance. Necessary written instructions were reviewed with the patient and given to him.

Follow-up

After the fitting of the patient, the social worker followed up on the patient at intervals of one month and six months and sometimes more frequently, if recommended by the optometrist, to determine how and to what extent optical aids had contributed to the client's greater personal and vocational adjustment. At the end of one year, the patient returned for a re-evaluation. If the patient was experiencing any problems, such as need for aid adjustment or repairs, he was scheduled for a clinic visit sooner.

The social worker served as a pivot for involving the patient in other activities within the rehabilitation center. She conferred with the vocational counselor, the case worker, the home teacher, the mobility instructor and other appropriate staff in encouraging the patient to utilize center services as another means of adjusting to the new aid.

In the case of a youngster in school, the social worker discussed the use of aids with the teacher, enlisting her assistance in providing the child the supervision needed to use the aids correctly and consistently.

A brief report of the findings of the Low Vision Clinic was sent to the referring ophthalmologist or the optometrist. This report was signed by the clinic ophthalmologist and the optometrist.

Fees

Based on a sliding scale of $1.00 to $25.00, fees were charged according to each patient's financial situation, giving consideration to the individual's total obligations. For those who were unable to pay, fees were waived. Patients were requested to pay for their optical aids which were obtained for them at the wholesale price plus 20%. The 20% mark-up was deemed necessary to provide for a reserve in the event that optical aids were returned or needed to be repaired because of patient's dissatisfaction.

For those individuals who were unable to pay for the optical aids, assistance was provided through agency funds and through the various Lions Clubs in the State.

No one was turned away because of his inability to meet the cost of the clinic services or the cost of the optical aids.

Equipment

The basic equipment for the clinic such as the refracting chair, the lens cabinet, the instrument table, professional stool, etc. were available before the project began. All other equipment was purchased upon recommendation of the ophthalmologists and the optometrists. Trial lenses and charts were purchased by the Hawaii Lions Eye Foundation and Kamehameha Lions Club. For a complete list of equipment and aids, refer to Appendixes A and B.

Forms

At the time of planning for the project, various statistical forms to be used for the gathering of information were prepared. These forms were later reviewed by the psychologist who recommended certain changes.

RESULTS OF PROJECT

The findings of the project were encouraging and gratifying. It accomplished the primary purpose of applying the latest devices and glasses in magnifying aids to improve the visual acuity of partially seeing individuals. The successful use of optical aids contributed greatly in extending their educational, social and vocational activities, and in some instances, rather dramatically.

Although the total number of patients for this project was small, the 90% success of those who completed their evaluation leave no doubt that the Low Vision Clinic is of great benefit to severely visually handicapped individuals. The fact that the State approved this program as one of the basic services of the State agency for the blind indicates that the Low Vision Clinic as a community resource, strengthens the total existing rehabilitation services to blind and visually handicapped individuals in the State.

As a result of their financial and moral support of this project, the Lions Clubs in this State have gained a better understanding of the needs of severely visually handicapped individuals and have become more aware of the role they can play in contributing toward the development of resources for the blind in the community.

There were 150 applicants for the Low Vision Clinic. Eighty-four or 56% were male, compared to 66 or 44% females. Fifty patients were congenitally blind and 100 had acquired blindness.

Of the total of 150 applicants, 129 or 86% completed their clinic evaluations. The remaining 21 or 14% did not complete their evaluations for the following reasons:

1. Five were rejected, either because of adequate vision and optical aids were not indicated, or the patient did not have any useful vision.

2. Three discontinued evaluation because of illness or disability.

3. Ten were satisfied with their visual status and lacked interest and motivation to continue the evaluation.

4. Two discontinued because of unstable, fluctuating vision.

5. One patient left the State.

Of the 129 patients who completed their evaluations, 116 or 90% benefitted from optical aids. Of this group, 53% were male and 47% females. One-fourth (39) were congenitally blind. Twenty-seven or 21% had no previous correction or aid at the time of their referral to the Clinic.

Slightly less than one-half of the total number of patients successfully fitted with optical aids were vocational rehabilitation clients of the agency.

These individuals were either receiving vocational rehabilitation services at the time of referral or were accepted for service after they made application to the Low Vision Clinic. Twelve of 56 clients were successfully rehabilitated after optical aids were prescribed. At the end of the project 19 others were attending school, 2 were deceased, and the remainder were in various stages of the rehabilitation process.

A total of 675 visits were made to the clinic by the 150 patients. Clinic visits varied from one to twelve visits for one patient, with five visits being the average per patient. The reason for the wide range in patient visits was attributed to the fact that some patients discontinued their evaluation after one visit, for reasons stated above, and others required a longer adjustment period before they were prescribed aids. Only one patient was examined and prescribed optical aids in one visit. In this one situation, the patient came from another island and could not remain beyond the one day for the necessary examinations. Under ordinary circumstances, no patient was prescribed an aid without the initial evaluation by the social worker and at least two visits for the optometric examination.

The one patient who had twelve visits required more than the usual number of visits because her vision fluctuated from one visit to the next. She was prescribed six aids which necessitated the additional visits for fitting.

In addition to the 675 clinic visits, other visits for adaptive training were arranged by the social worker. These visits were made two or three times a week over a period of from two weeks to four months.

During the three-year period, follow-up examinations were possible for two-thirds of the patients who returned at intervals of three months, six months and one year. During these examinations, 30 patients requested additional optical aids because successful use of their initial aids led to other needs, and deterioration of vision in some patients necessitated change in prescription. This suggested that the ability to use one's vision improves with continued use of the aids, or further, change of prescription is necessary to meet their changing visual conditions.

Success of Optical Aids by Age Distribution - Table 1

Age was not a factor in the fitting of optical aids. There were peculiar problems in the different age groups, however, the ages of the patients tested in the clinic ranged from the youngest of 5 to the oldest of 87 years. Two-thirds of the project population were 49 years and younger.

Of the 9 in the "less than 10" year group, 4 had no correction and 5 were wearing glasses at the time of referral. After completion of their clinic evaluation, these children were given prescription glasses and bifocals which were considered to require the least amount of adjustment problems. The children, including the 5 year old, kept their glasses on, indicating that they will use aids if they can derive better and clearer vision with aids.

TABLE 1

SUCCESS WITH OPTICAL AIDS BY AGE DISTRIBUTION

Age	Total	Benefitted		Not Benefitted	
		Number	%	Number	%
0 - 9	9	9	100%		
10 - 19	29	25	86%	4	14%
20 - 29	14	14	100%		
30 - 39	23	22	96%	1	4%
40 - 49	11	10	91%	1	9%
50 - 59	10	9	90%	1	10%
60 - 69	11	10	91%	1	9%
70 - 79	11	6	55%	5	46%
80	11	11	100%		
Total	129	116	90%	13	10%

The examination of the youngsters for the optical aids required additional services of the social worker in the clinic. Many hours were spent preparing a child for the clinic evaluation, including teaching the illiterate E chart and having the child practice at home, acquainting him with the Clinic testing procedures and planning for shorter examination periods, all of which were necessary to assure the most favorable testing conditions.

From the rehabilitation standpoint, a young child whose visual functioning can be determined early through use of optical aids, will develop the most appropriate communication skills commensurate with his visual loss, thus greatly influencing the course he will follow not only in his educational pursuits but in his vocational goals. Young children must be followed periodically in the Low Vision Clinic so that as they grow older and can tolerate other aids, they can be fitted as needed.

In the 10 to 19 year group, three students rejected aids. One student did not like the appearance of the aid, another could not adjust to the contact lenses which had been recommended, and the third, a braille student, was not motivated to use her vision although she could see textbook print with an aid. Her preference for braille reading far outweighed the potential benefits she could derive from reading of inkprint as it meant a complete new method of reading. Another patient, a recent high school graduate, was not given an aid as he had never learned to use his very limited residual vision and in spite of hours spent in adaptive training, he could not utilize the aids for any specific purpose.

With this adolescent group, it was difficult to determine whether the rejection of aids was due to the change in self concept, the embarrassment of struggling to "see", or the difficulty in using optical aids with their very limited vision.

The low percentage of success in the 70-79 age group was not due to the age factor alone, but to the extent of visual loss which prevented any visual improvement.

All of the patients in the "80 and over" age group were very successful with optical aids. This indicates that a highly motivated older person, especially one who lives alone, will want maximum visual improvement in order to maintain his independence.

Success of Optical Aids by Duration of Visual Loss - Table 2

Patients who were blind six years and less had a slightly higher rate of success with optical aids than those whose visual loss was of longer duration. Although two out of seven persons who were blind three to four years did not benefit from aids, this was not related to the duration of the loss.

The patients who were successful with optical aids were those who had accepted the fact that their vision could not be improved with conventional glasses, and who were pleased to obtain whatever improvement was possible with optical aids. They were willing to sacrifice and adjust to the inconveniences and limitations of optical aids for the advantages of more useful vision.

There was no significant difference between congenital blindness and acquired blindness insofar as the success rate was concerned.

TABLE 2

SUCCESS OF OPTICAL AIDS BY THE DURATION OF VISUAL LOSS

Duration of Visual Loss	Number of Patients	Benefitted		Not Benefitted	
		Number	%	Number	%
Under 1 year	9	9	100%		
1 - 2 years	9	9	100%		
3 - 4 years	7	5	71%	2	29%
5 - 6 years	20	20	100%		
7 - 10 years	15	14	93%	1	7%
11 - 15 years	27	24	89%	3	11%
16 - 20 years	13	11	85%	2	15%
Over 20 years	29	24	83%	5	17%
Total	129	116	90%	13	10%

Success of Optical Aids by Distance and Near Vision - Table 3

In general, optical aids are more practical for near vision than they are for distance vision. Of the 116 who were fitted with aids, 65 or 56% of the patients obtained improvement for both near and far; 42, or 36% for near only; and nine or 8% for distance only. The majority of the patients who accepted aids for near vision only were not interested in aids for distance vision. Near vision aids were more acceptable as near vision requires detailed, accurate and sharper vision, whereas distance vision requires more gross vision with a large field. Patients who were corrected for distance only had adequate vision for near or could not get improvement with aids. The types of distance aids were limited to telescopic aids, and since they had limited field of view, many patients rejected them.

TABLE 3

SUCCESS OF OPTICAL AIDS IN NEAR AND DISTANCE VISION

Total	Near		Distance		Both Near and Distance	
	Number Benefitted	%	Number Benefitted	%	Number Benefitted	%
116	42	36%	9	8%	65	56%

The focal distance with the near vision aids ranged from 1" to 14". Some patients could not tolerate reading at close range because of the discomfort as well as the slow rate of reading.

Most patients obtained two separate aids, for near and distance correction. However, as many as six separate aids were prescribed for some. Patients who were prescribed several aids were given two or three aids to begin with and additional aids were given after a period of adjustment to the initial aids. Since each optical aid has limitations in its use, separate and supplementary aids are often necessary to meet the specific needs of the patient.

Original Visual Levels and the Acceptance Rates for Optical Aid - Table 4

The visual acuity of the patient had little effect on the acceptance of the aids. The majority of the patients had between 20/200 and 20/400 vision. One hundred sixty-six aids were recommended for 60 patients in this group, of which 155 or 93% of the aids were accepted by the patients. Those with better than 20/200, or less than 20/400 vision accepted aids at almost the same rate.

TABLE 4

EFFECT OF ORIGINAL VISUAL LEVEL ON ACCEPTANCE RATES FOR OPTICAL AIDS

Original Visual Level	Number of Aids Recommended	Number of Aids Accepted	Number of Aids Rejected	Rate of Acceptance
Better than 20/200	44	41	3	93%
20/200 to 20/400	166	155	11	93%
Less than 20/400	36	33	3	92%
Total	246	229	17	92%

Success of Optical Aids on the Original Visual Acuity - Table 5

A total of 116 patients had some improvement in vision with the prescribed optical aid. Of the 78 patients who had vision of 20/200 or less, 34 were able to see better than 20/200. As shown in Table 5, 44 others in this category received aids,and although visual acuity did not increase,the aids made the images clearer and sharper, removing the fuzziness which was present without the aids.

Sixty-four patients had near vision of J 8 or less. Of this group, 54 were able to read text book print with aids. The near vision correction was not always prescribed to give J 1 or the best near vision possible. The prescription was based on the aid which provided the most functional vision, not necessarily the best visual acuity. For most patients, vision for reading the newspaper or the telephone directory was sufficient.

TABLE 5

SUCCESS OF OPTICAL AIDS ON THE ORIGINAL VISUAL ACUITY

Original Visual Acuity	Number of Patients	Visual Acuity with Aids					
Distance Vision		20/40 or better	20/50-20/70	20/80-20/100	20/125-20/160	20/200-20/400	Less than 20/400
20/70 or better	11	5	6				
20/80 - 20/100	14	5	3	6			
20/125 - 20/160	13	2	1	4	6		
20/200 - 20/400	60	7	11	10	0	32	
Less than 20/400	18	0	2	0	4	7	5
Total	116	19	23	20	10	39	5
Near Vision		J3 or better	J4 - J5	J6 - J7	J8 - J10	J11 - J14	J15 - J20
J3 or better	25	25					
J4 - J5	14	14					
J6 - J7	13	7	4	2			
J8 - J10	17	13	2	0	2		
J11 - J14	23	16	4	0	3		
J15 - J20	24	14	4	1	2	0	3
Total	116	89	14	3	7	0	3

Success of Optical Aids on Various Diagnosis - Table 6

Most patients in this project had more than one diagnosis. The list in Table 6 shows only the primary diagnosis of blindness.

Although many different ocular diagnoses were encountered in this project, as may be noted in Table 6, there were insufficient numbers of patients in any specific categories to form valid conclusions as to the success of optical aids related to diagnosis. Nevertheless, it appeared that patients with aphakia, macular degeneration, and optic atrophy had favorable results with optical aids. Although patients with diabetic retinopathy and retinitis pigmentosa obtained visual improvement, such was only temporary, due to the progressively deteriorating nature of these conditions.

TABLE 6

SUCCESS OF VISUAL AIDS ON VARIOUS DIAGNOSES

	Diagnoses	Number of Patients	Benefitted Number	Benefitted %	Not Benefitted Number	Not Benefitted %
1.	Albinism	1	1	100%		
2.	Amblyopia	5	5	100%		
3.	Aniridia	1		0%	1	100%
4.	Aphakia	12	12	100%		
5.	Cataract (congenital)	2	2	100%		
6.	Cataract (senile)	6	5	83%	1	17%
7.	Corneal degeneration, dystrophy	2	2	100%		
8.	Coloboma of iris, choroid and retina	1	1	100%		
9.	Diabetic retinopathy	11	11	100%		
10.	Dislocated lens	1	1	100%		
11.	Glaucoma	6	4	67%	2	33%
12.	Harada's disease	2	2	100%		
13.	Hypertensive retinopathy	1	1	100%		
14.	Keratitis	1	1	100%		
15.	Keratoconus	1	1	100%		
16.	Macular degeneration	19	16	84	3	16%
17.	Microphthalmos	4	3	75%	1	25%
18.	Myopia (high)	3	3	100%		
19.	Nystagmus	3	3	100%		
20.	Optic atrophy	25	24	96%	1	4%
21.	Retinal detachment	3	2	67%	1	33%
22.	Retinitis	2	2	100%		
23.	Retinitis pigmentosa	6	5	83%	1	17%
24.	Retrolental fibroplasia	3	2	67%	1	33%
25.	Uveitis	8	7	88%	1	12%
	Total	129	116	90%	13	10%

Acceptance Rates for Various Optical Aids - Table 7

Conventional glasses and microscopic lenses were most frequently prescribed. Most patients found the conventional type of glasses more acceptable than the special optical aids because of wider visual fields and greater focal distance. High plus reading lenses, which was any aid over +3.00 diopters of add, were also used frequently.

Although telescopic lenses are very limited in function,39 patients successfully used them for such purposes as spotting signs and objects in the distance, seeing the blackboard, observing sports events and sightseeing.

TABLE 7

TYPES OF AIDS PRESCRIBED

Aid	Number of Aids Recommended	Number of Aids Accepted	Number of Aids Rejected
Conventional Glasses	62	61	1
High Plus Reading Glasses	25	25	
High Add Bifocals	20	17	3
Telescopic Lenses	44	39	5
Microscopic Lenses	62	56	6
Hand Magnifiers	25	24	1
Stand Magnifiers	5	5	
Loupes (Near)	2	2	
Contact Lens	1	0	1
Total	246	229	17

In general, the spectacle forms of aids were preferred to the hand magnifiers. Hand magnifiers were used advantageously for reading prices and labels, gauges and temperatures and maps where a greater focal distance is needed. However, hand magnifiers also have certain disadvantages. They eliminate the use of one hand because of the necessity of holding the aid, it is difficult to get the proper fixating distance, and a person with tremors cannot use them.

The patient's preference for a specific aid was always given consideration since it was of primary importance that the patient use his aid most comfortably.

Level of Education and Type of School Attended - Tables 8 and 8a

The educational levels of the patients were divided into two groups--those who had completed their education by the end of the project and those who were still attending schools. Table 8 shows that there was a correlation between the educational background of the patient and the success in using the aids. The more education, the higher the rate of success. Those with no education, although they were not illiterate, had only 40% success, compared to the 83% of those who had continued beyond high school.

There was a higher rate (86%) of success with the students. The optical aids affected the type of school the young student attended. For example, five students from the school for the blind were prescribed optical aids, resulting in three transferring to regular schools and one to a resource class. The fifth student left the State and her school placement is not known.

It is difficult to know whether the use of the optical aids resulted in the change in the educational setting or whether the visual acuity obtained in the clinic evaluation helped to determine the correct educational placement. Often the eye examination report of a child of five or six will indicate visual acuity as "count fingers", "light perception", or "unable to test", although teachers have observed that the child has more vision than the reports indicate.

With the Low Vision Clinic evaluation, the teachers were better able to understand the amount of vision the child had and to plan their education accordingly. The social worker's interpretation of the findings gave the teachers the added incentive to help the child to use his vision to the maximum.

TABLE 8

SUCCESS OF OPTICAL AIDS BY LEVEL OF EDUCATION COMPLETED

Educational Level	Total	Benefitted Number	Benefitted %	Not Benefitted Number	Not Benefitted %	Application Rejected Number	Application Rejected %
None	5	2	40%	1	20%	2	40%
Unknown	5	3	60%			2	40%
K - 6	17	12	71%	3	18%	2	11%
7 - 9	16	12	75%	2	12.5%	2	12.5%
10 - 12	40	30	75%	1	2.5%	9	2.5%
12+	24	20	83%	2	8%	2	8%
Total	107	79	74%	9	8%	19	18%

TABLE 8a

SUCCESS OF OPTICAL AIDS BY PRESENT GRADE LEVEL

Educational Level	Total	Benefitted		Not Benefitted		Application Rejected	
		Number	%	Number	%	Number	%
K - 6	15	14	93%			1	7%
7 - 9	6	3	50%	3	50%		
10 - 12	11	10	91%			1	9%
12+	11	10	91%	1	9%		
Total	43	37	86%	4	9%	2	5%

Success with Optical Aids by Occupational Groups - Table 9

The 116 individuals who benefitted from optical aids came from various occupational groups. In view of the small number of subjects for this project, findings may not be valid, but generally, there was no significant effect of occupation on the success in using optical aids, nor was there any indication that any one group tended to seek out Low Vision Clinic services.

Twelve patients who had no previous employment became gainfully employed. Twenty-eight blind persons who were able to use aids successfully continued in employment and were able to function more adequately on their jobs.

Twenty-four homemakers gained some visual improvement with their aids, enabling them to care for their families more efficiently. Eighteen retired people were able to use their aids to function more independently no longer requiring others to do their reading for them. One-third of the total project population were students who are finding the optical aids of tremendous benefit in the pursuit of their education.

TABLE 9

SUCCESS OF OPTICAL AIDS BY VARIOUS OCCUPATIONAL GROUPS

Occupational Groups	Total	Benefitted	Not Benefitted
Professional	7	5	2
Semi-professional	5	5	
Managerial	4	4	
Clerical	1	1	
Sales	4	4	
Service	2	2	
Agricultural	1	1	
Skilled	1	1	
Semi-skilled	3	3	
Unskilled	4	2	2
Homemaker	27	24	3
Retired	20	18	2
Unemployed	8	8	
Student	42	38	4
Total	129	116	13

CONCLUSIONS AND RECOMMENDATIONS

Ninety percent of persons with stabilized eye conditions who are legally blind are able to gain improved visual efficiency.

The degree to which the individual can make use of his remaining vision has a direct bearing on the methods used in his educational process and on the types of jobs he may be able to perform.

Real consideration might be given to making:

1. An optical aids evaluation a part of the diagnostic process of blind and severely visually handicapped applicants for vocational rehabilitation.

   The sooner the worker knows how the individual is making use of his vision, or if any visual improvement is possible with aids, the more effective he will be in counseling his client towards a realistic vocational goal. With greater visual efficiency, the visually disabled person will be able to consider a wider range of vocations because of his ability to do finer work.

2. An optical aids evaluation available to all children with severe visual limitations prior to their school placement.

   This may make the difference between attendance in a school for the blind, in a resource class, or in a regular class. The earlier it is determined that the child can read inkprint, the more profitable it will be for him, as his curriculum will be planned appropriately, and not through trial and error.

   These students must be evaluated periodically to meet the changes for visual improvement. The very young will be able to accept more sophisticated types of aids as he matures and as he develops more visual efficiency.

Successful results in fitting of optical aids is higher if done in a clinical setting limited to this purpose than if done in the private doctor's office. Private physicians, because of the demands of a busy practice, do not have the hours to spend which are required in the fitting of an aid, nor do they have the number and variety of aids required to be certain that the patient is fitted with what is best for him. Other pluses which can be attributed to an optical evaluation in a clinic setting are the benefits to the patient as a result of the team approach, and the ready availability of professional personnel to assist him in his adjustment to the aid.

Even a greater degree of success can be expected when the clinic is located in a rehabilitation facility. Here there are other specialized personnel and services for the blind and visually handicapped which can be coordinated

for maximum benefit to the client. Those who apply for other services within the facility are routinely screened for Low Vision Clinic services, and are referred upon approval of the ophthalmologist. Low Vision Clinic services are not set apart, but are an integral part of the program for the blind.

Although an individual may have residual vision which he can use more efficiently with the use of an optical aid, he may reject the aid for any number of reasons including:

1. The need for learning new methods for accomplishing tasks that he has already mastered as a blind person--reading for example;

2. He has no need to be independent, or feels threatened that the attention he receives because of his dependency needs will be cut off;

3. The aid attracts attention and gives him an appearance different and, therefore, objectionable, from that of his peers. This is more applicable to teenagers than to other age groups;

4. He becomes frustrated because a fluctuating eye condition makes it impossible for him to use his aid consistently; or

5. He becomes frustrated because his expectations of the aid were not realistic. He discovers that the aid is incapable of restoring full visual power.

On the other hand, there are individuals who are well motivated and make maximum use of the aid. These are individuals who, because of limited vision, have been struggling to keep up with their job demands or household duties. Oehrs, who before losing their sight were voracious readers, who with the help of an aid are again able to read inkprint. Aids perhaps are accepted most readily by those individuals who want to break out of the isolation which blindness imposes.

There must be a continuous interpretation and demonstration to the community of the value of the services of the Low Vision Clinic for blind and visually handicapped individuals of all ages. Acceptance of the Low Vision Clinic by ophthalmologists and optometrists in the community is essential for the continued utilization of the clinic services to meet the needs of the special patients.

All agencies and personnel concerned with services to people must be aware of the clinic, its purposes, its methods of testing, the use of optical aids and what it means to the person with sub-normal vision. Misconceptions must be clarified so that referrals are made with the knowledge that the service of the clinic may greatly influence future activities of the individual. Public education must be effective if any new program is to receive acceptance by the community.

APPENDIX

APPENDIX A

CLINIC EQUIPMENT

Ophthalmological Chair with Instrument Stand
Instrument Table
Professional Stool
Lens Cabinet
Phoropter
Projector
Projector Screen
Retinoscope
Giantscope
Lensometer
Tensor Lamp
Lux-O-Lamp
AO Trial Frame
Precision Cosmet Child's Trial Frame

TEST CHARTS

Sloan Chart for 20 feet
AO Letter and Illiterate Slides for 20 feet
Lebensohn Near Vision Chart
Bausch & Lomb Reading Cards
Jaeger Test Types
AO Illiterate Near Vision Card

OFFICE EQUIPMENT

2	Desks
2	Desk Chairs
2	Chairs
1	Typewriter
1	Stenorette
1	File Cabinet
1	Storage Cabinet
1	Display Cabinet

APPENDIX B

TRIAL LENSES

Spectacles and Loupes

American Optical Trial Lens Set
American Optical Microscopic Lens Set, 2x to 12x
Selsi Skeleton Loupes, 8D to 26.6D
All-Purpose Magnifier 2x
Volk Conoid Set 15D to 100D
Aloe Reading Unit 2.2x
Monocular Loupe, Clip-on, 3x
Telesight Monocular Loupe 3x
Magnocular II, Magnifying Binoculars, 14", 3x to 5x
Designs for Vision Reading Binoculars 3.5x
Feinbloom Reading Glasses 3.5x
B&L Watchmaker's Loupe, 3x to 10x

Hand Magnifiers

B&L Rectangular Reader 4.50D
B&L Illuminated Rectangular Reader 4.50D
Selsi Rectangular Reader 5D
McLeod Major Reader 6D
McLeod Large Aspherical 8D
B&L Carousel Magnifier 2x, 4x, 6x
McLeod Handimag 9D
Selsi Telephone Magnifier 10D
Edroy Longview Folding Magnifier 2.5x
Selsi Magnifier 2½" with Metal Ring and Holder 10.50D
Selsi Magnifier with Leather Case 11D
McLeod Small Aspheric Hand Magnifier 11.50D
Selsi Pocket Magnifier 4x
B&L Pocket Magnifier, 35mm, 3x to 7x
B&L Pocket Magnifier, 35mm, 4x
Selsi Pocket Magnifier 5x
B&L Pocket Magnifier, 4x to 9x
B&L Pocket Magnifier, 5x to 20x
McLeod Plasta Aspheric Cataract Hand Reader 20D
Selsi Pocket Magnifier 8x
Selsi Pocket Magnifier 10X
Selsi Achromatic Loupe 10x
B&L Pocket Magnifier 5x
B&L Pocket Magnifier, 5x to 12x

Stand Magnifiers

- Selsi Stand Reader, 5", 3D
- McLeod Monarch Magnifier 4.50D
- House of Vision Meniway Folding Stand Magnifier 5D
- House of Vision Bedwell Wide-Field Magnifier 1.8x
- McLeod Large Stand Reader 8D
- Selsi Stand Reader, 3", 8D
- Apex Ezy-Rede Magnifier, 2-1/4" x 7", 10D
- McLeod Small Stand Magnifier 11.50D
- Apex Stand Magnifier, 1-5/8" x 8", 12D
- Apex Stand Magnifier, 1-5/8" x 4", 12D
- Edmund Plastic Base 3x
- Selsi Plano Convex 4x
- American Optical Focusable Stand Magnifiers 18D, 23D, 29D, 37D, 44D
- Stereo-Tach. Adisco Illuminated Magnifier, Battery Model, 5x
- McLeod Cataract Stand Reader 20D
- Edmund Plastic Base 6x
- Selsi Illuminated Magnifier 7x
- Pike Non-Achromatic, Battery Model, 7x
- McLeod Hi-Power 29D
- Selsi Tripod Magnifier 7.50x

Distance Aids

- Kollmorgen 1.7x Telescopic Spectacles with Adds +6.00, +8.00
- Kollmorgen 2.2x Telescopic Spectacles with Adds +6.00, +8.00
- Telesight Monocular Telescopic Loupe 2.2x
- Selsi Folding Sports Glasses 2.5x
- Aloe Distance Unit 3x
- Telecopter 4x with Adds +3.00, +6.00, +10.00
- 6x Monocular Telescope with Adds +4.00, +6.00, +10.00
- Selsi Miniature Wide-Angle Binocular, 7x 23
- Selsi Prism Monocular, 7x 50
- Selsi Monocular 10x

APPENDIX C

EYE EXAMINATION REPORT FOR LOW VISION CLINIC

Date ____________________

Applicant's Name ________________________________ Case Number __________

Address ____ Telephone __________

Age ______ Sex ______ Marital Status __________ Age at Onset __________

Other Disability/Medical Problems ____

____

Family History of Blindness __________ Cause (if known) __________

Education Completed __________ Occupation ______________________________

	Vision without Glasses			Vision with Glasses			Rx for Present Glasses
	Distance	Near		Distance	Near		
RE			RE			RE	
LE			LE			LE	

Current Refraction (if it differs from present glasses)

RE

LE

Diagnosis and Clinical Findings: (Include visual fields, if significant)

Etiology: ___hereditary ___congenital ___traumatic ___infectious

___metabolic ___neoplastic ___toxic ___degenerative

other ____

Recommendations/Comments:

Date of Examination __________________ Examiner __________________

APPENDIX D

OPTOMETRIC EXAMINATION

Name________________________ Age________ Date________________

(Underline appropriate word or words, or fill in blank spaces.)

1. Ambulation
    a. Crosses street (1) without cane (2) with cane (3) with a guide.
    b. Walks in unfamiliar surroundings (1) without cane (2) with cane (3) with a guide.
    c. Walks indoors (1) by sight (2) by touch.
    d. Sees traffic lights______street signs_____ bus signs_____ steps________ street curbings__________.
2. Sunlight (a) does (b) does not interfere with vision.
3. (a) Wears (b) Does not wear sun glasses. Wears sun glasses (a) indoors (b) outdoors.
4. Night vision is (a) good (b) fair (c) poor.
5. Color vision (patient's estimation) is (a) good (b) fair (c) poor.
6. Vision (a) does (b) does not fluctuate. Explain (a)____________________
7. Views movies_________ T.V.__________Recognizes faces________(note distance)
8. Reads headlines______ subheadlines_______ news articles_______ books_______ magazines______ braille_______
9. Lighting preferred for reading_______________.
10. Number of years since reading newsprint_______________.
11. Reasons for wanting optical aids____________________

Vision without Glasses: Distance, OD______________ Near, OD______________

OS______________ OS______________

Present Rx:

Distance

1. OD_______________10/
   OS_______________10/
   add_____________
   How long?____ Purpose____________
2. OD_______________10/
   OS_______________10/
   add_____________
   How long?____ Purpose____________

Near

1. OD__________________J
   OS__________________J
   How long?____ Purpose____________
2. OD__________________J
   OS__________________J
   How long?____ Purpose

Type of Aid_______________ Power______________ How long?__________

Purpose____________________

Type of Aid_______________ Power______________ How long?__________

Additional History____________________

P.D.____________________

Preferred eye____________________

External Ocular Examination____________________

Ophthalmoscopy____________________

Ophthalmometer: OD______________ OS______________

Static Retinoscopy: OD______________

OS______________

Distance Subjective: OD______________10/

OS______________10/

Second Subjective: OD______________10/

Date OS______________10/

APPENDIX D (continued)

OPTOMETRIC EXAMINATION

Page 2

Date

Near Subjective: OD ____________ J

OS ____________ J

Second N. Subjective: OD ____________ J

OS ____________ J

With pinhole: OD ____________

OS ____________

Distance Subjective with 1.7x T.S.

OD ____________ 10/

OS ____________ 10/

With 2.2x T.S.

OD ____________ 10/

OS ____________ 10/

With 2.5x T.S.

OD ____________ 10/

OS ____________ 10/

With 3x T.S.

OD ____________ 10/

OS ____________ 10/

With 4x T.S.

OD ____________ 10/

OS ____________ 10/

With 6x T.S.

OD ____________ 10/

OS ____________ 10/

Specify other devices used:

Near Subjective with 1.7x T.S. and add

OD ____________ J

OS ____________ J

Near Subjective with 2.2x T.S. and add

OD ____________ J

OS ____________ J

Near Subjective with Microscopic Spectacles

OD ____________ J

OS ____________ J

Second

OD ____________ J

OS ____________ J

Third

OD ____________ J

OS ____________ J

Fourth

OD ____________ J

OS ____________ J

FINAL PRESCRIPTION AND RECOMMENDATIONS

Distance Rx OD ____________ Add ________ Tint ________ P.D. ________

OS ____________

Seg. ht. ____________ Seg. width ____________ Type ________

Frame ________ Color ________ Eye Size ________ Bridge ________ Temple ________

Near Rx OD ____________ Tint ________ P.D. ________

OS ____________

Frame ________ Color ________ Eye Size ________ Bridge ________ Temple ________

Telescopic Lens Rx OD ____________ Add ________ P.D. ________

OS ____________ Type ____________

Frame ________ Color ________ Eye Size ________ Bridge ________ Temple ________

Microscopic Lens Rx OD ____________ Tint ________ P.D. ________

OS ____________ Type ____________

Frame ________ Color ________ Eye Size ________ Bridge ________ Temple ________

Other ____________________________________

____

Final remarks summarizing case:

Instructions, recommendations, future examinations:

____

Staff Optometrist

APPENDIX E

INDIVIDUAL STATISTICAL DATA - LOW VISION CLINIC

Date of Application ____________________

Name ____________________ Birthdate __________ Age ____ Sex ____ Race ______

Type of School Attending ______________ Grade ____ Type of School Attended ______________ Level of Education Completed ______

Occupation Before Disability ______________ Present Occupation ______________ Source of Income ______

Age at Onset of Disability __________ Duration of Loss ______________

Diagnosis: OD ______________________________ Congenital ______

OS ______________________________ Adventitious ______

Visual Aids Used Before Referral ______________________________

Best V.A. at Referral: Distance, OD ______________ Near, OD ______________

OS ______________ OS ______________

Types of Aids Accepted ______________________________

Types of Aids Rejected ______________________________ None Prescribed ______

Best V.A. with Aids: Distance, OD ______________ Near, OD ______________

OS ______________ OS ______________

Date of Discharge ______________ Total No. of Clinic Visits ______

ONE MONTH FOLLOW-UP: ______________________________

Type of Aid	Using Aid	Using Aid with Some Difficulty	Not Using Aid	Remarks
1.	____	____	____	
2.	____	____	____	
3.	____	____	____	
4.	____	____	____	

SIX MONTHS FOLLOW-UP: ______________________________

Type of Aid	Using Aid	Using Aid with Some Difficulty	Not Using Aid	Remarks
1.	____	____	____	
2.	____	____	____	
3.	____	____	____	
4.	____	____	____	

TWELVE MONTHS FOLLOW-UP: ______________________________

Type of Aid	Using Aid	Using Aid with Some Difficulty	Not Using Aid	Remarks
1.	____	____	____	
2.	____	____	____	
3.	____	____	____	
4.	____	____	____	

APPENDIX F

CASE ILLUSTRATION

Mr. T. is a 55-year-old man with a history of poor vision for 13 years. Cataract surgery on the right eye was performed 13 years ago, and on the left, 9 years ago. Following complications, the right eye was enucleated.

At the time of referral to the Low Vision Clinic by the patient's ophthalmologist, Mr. T's diagnoses were "aphakia, nystagmus, dense secondary membrane and vitreous opacities". His vision in the only remaining eye was "finger counting poorly". He wanted to see more, but many emotional problems and the difficult adjustment to his visual loss interfered with his total functioning.

He had recovered from a period of stormy adjustment to his loss of vision and was apprehensive and doubtful of any visual improvement. He was convinced that the less he used his vision, the better it would become, although still eager to know more about optical aids.

The clinic ophthalmologist assured him that his vision would not deteriorate with use and that the patient's private ophthalmologist had provided all medical and surgical restoration possible. This left the evaluation of optical aids as the only possibility for improving his vision.

The optometrist kept the clinic examinations short, as the clinic team felt that he could not tolerate long periods of examinations in view of his poor adjustment. After a few visits, the optometrist was able to show Mr. T. that optical aids could be helpful.

In view of the patient's attitude, emotional problems and unreadiness for optical aids, an adaptive training period was instituted two times a week, which lasted for four months. During these sessions he was counseled in overcoming his fear of using vision in his only remaining eye, and in developing functional use of his vision to see labels and instructions on merchandise, prices, numbers on currency, newspaper, Bible, etc.

At first, he could use his vision for only three to five minutes. Gradually this increased to 15 minutes when he was able to read without headaches or fatigue. By the time Mr. T. was ready for an aid, he was able to read for 30 minutes at a time, and had accepted the fact that continued use of aids improved his visual functioning. With microscopic glasses he had near vision of J 4, enabling him to read standard textbook print, newspapers, and pocket books.

For Mr. T. the important factors in the successful fitting of optical aids were the changes in attitude, the improved emotional state of the individual and his motivation to see. Each member of the clinic team contributed to the success of this patient through his distinct role. This is a situation in which the patient was resigned to the fact that he would never read again but through encouragement and reassurance, visual restoration was possible. He has developed greater interest in reading which has become a daily pleasurable activity for him.

APPENDIX G

CASE ILLUSTRATION

Susan, age 7, was a student in the school for the blind at the time of her referral to the Low Vision Clinic. Soon after birth, diagnoses of congenital glaucoma, nystagmus and esotropia were made. Susan had surgery for glaucoma when she was a year and a half, and again when she was three and a half years old.

She had a difficult start and because of her slow progress, she was considered a slow learner. She attended nursery school and later a regular kindergarten. When she reached her first grade level, she was placed in the school for the blind since there was no other appropriate placement for her in view of her severe loss of vision.

She was referred to the Low Vision Clinic by the school ophthalmologist. Her distance acuity was 2/200 in both eyes. She had no previous correction for her vision. During her five clinic visits it became evident that there was good possibility of achieving some visual improvement. She was fitted with prescription glasses which enabled her to see 10/50 with the right and 10/30 with the left eye. Her near vision was improved from J 12 to J 4 with both eyes, thereby enabling her to read regular print.

About the time of her referral to the Low Vision Clinic, it was discovered that she had a severe hearing loss. A complete diagnostic evaluation through the Department of Health revealed that her greatest problem was in the area of learning disability. With glasses to improve her vision and a hearing aid to improve hearing, she was transferred from the school for the blind to a special class for children with learning disabilities.

This particular case illustrated the importance of early diagnostic evaluation and prompt services to children with multiple handicaps. A common problem faced by the multiple handicapped is their slow learning process, which oftentimes leads to improper placement. Equipped with the essential aids, this child has been given a good beginning. She is making good progress in her education and hopefully by the time she reaches the age when vocational rehabilitation services are needed, she will have had a good foundation to enable her to pursue her vocational goal.

APPENDIX H

CASE ILLUSTRATION

Mr. R. is a 24-year-old father of two children who was first referred to the Low Vision Clinic in April, 1966.

Mr. R. had been highly myopic as a youngster and at the age of 11 he suffered from retinal detachment in both eyes. When he was 18 years old, he had surgery for bilateral cataracts. His right eye was enucleated following post-operative complications. He had only light perception remaining in his left eye.

After his severe loss of vision at age 11, Mr. R. enrolled in a school for the blind and continued through his high school graduation. He then enrolled at the university where he earned his Bachelor's Degree. He attempted graduate studies but became discouraged in two separate attempts and discontinued further educational pursuits.

Mr. R. had temporary part-time jobs while attending the university. Since graduation, he was employed for brief periods in two or three different jobs.

In April, 1966, he suddenly began to "see" objects. His ophthalmologist referred him to the Low Vision Clinic as there appeared to be some useful vision remaining. After 12 years as a blind person, he had regained appreciable vision enabling him to distinguish objects.

On his first clinic visit, vision in his remaining left eye was 2/200 for distance and 20/800 on the Lebensohn Near Vision Chart. He was examined for five weeks before aids were prescribed giving him improvement for both near and distance vision. Microscopic glasses improved his near vision from 20/800 (or unable to read standard print) to J 1 at 3 inches (or better than standard print). Prescription glasses for distance improved his vision from 2/200 to 10/80 and with a telescopic attachment, he was able to see 10/30.

The use of optical aids opened a new visual dimension for Mr. R. which he never thought was possible. For the first time in 12 years, he began to see print and painstakingly read with his eye, using his vision constantly.

In subsequent visits to the clinic, he was able to utilize another pair of spectacles which further increased his visual functioning. He no longer reads Braille books or magazines. With his ability to read print, he is enjoying the many books and periodicals he reads. His reading is also helping to improve his spelling which had been poor. He is now able to read written orders for service, able to read the telephone directly in order to contact his clientele, and there is no need now for transcribing the orders in braille nor maintain a separate file in braille. He has even given up his dog guide which he had obtained just a few months prior to his regaining his vision.

He started on his job soon after he received his first set of optical aids and today, a year and a half later, he is still employed satisfactorily in his semi-professional occupation.

BIBLIOGRAPHY

Barraga, Natalie Carter. "Increased Visual Behavior in Low Vision Children," American Foundation for the Blind Research Series, No. 13, 1964.

Barraga, Natalie Carter. "Teaching Children With Low Vision," The New Outlook for the Blind, Vol. 58, No. 10, pp 323-326, December 1964.

Barraga, Natalie Carter. "Mode of Reading for Low Vision Students," The Education of the Blind, Vol. 12, No. 4, pp 103-107, May 1963.

Fonda, Gerald, M.D. "Characteristic and Low Vision Corrections in Albinism," Archives of Ophthalmology, Vol. 68, pp 754-761, December 1962.

Fonda, Gerald, M.D. "Definition and Classification of Blindness with Respect to Ability to Use Residual Vision," The New Outlook for the Blind, Vol. 55, No. 5, pp 169-172, May 1961.

Fonda, Gerald, M.D. "Evaluation of Telescopic Spectacle," American Journal of Ophthalmology, Vol. 51, No. 3, pp 433-441, March 1961.

Fonda, Gerald, M.D. "Management of the Patient with Subnormal Vision." C. V. Mosby Company, 1965.

Fonda, Gerald, M.D. "Report of Five Hundred Patients Examined for Low Vision," AMA Archives of Ophthalmology, Vol. 56, pp 171-175, August 1956.

Fonda, Gerald, M.D. "Subnormal Vision Correction for Aphakia," American Journal of Ophthalmology, Vol. 55, No. 2, February 1963.

Fonda, Gerald, M.D. "Subnormal Vision Corrections for the Partially Seeing," The Welfare Reporter, pp 61-63, April 1960.

Fonda, Gerald, M.D.; Snydacker, Daniel, M.D. "Optical Aids for Low Visual Acuity," American Academy of Ophthalmology and Otorhinolaryngology, January-February 1959.

Gibbons, Helen, M.D. "Low Vision Aids--The Educator's Responsibility," The International Journal for the Education of the Blind, Vol. 12, No. 4, pp 107-109, May 1963.

Lebensohn, James E., M.D. "Optical Aids for Subnormal Vision," The Sight Saving Review, Vol. 26, No. 4, pp 201-209, Winter 1956.

Little, Regina. "Getting the Most Out of Visual Aids," The New Outlook for the Blind, Vol. 59, No. 4, pp 141-144, April 1965.

Mann, James W. "Optical Aids Service and Its Implication for Education" The New Outlook for the Blind, Vol. 55, No. 2, pp 65-67, February 1961.

Milder, Benjamin, M.D. "Advantages of the Optical Aids Clinic," The Sight Saving Review, Vol. 30, No. 2, pp 78-84, Summer 1960.

"Panel Discussion--The Value of Low Vision Aids," Sight Saving Review, Vol. XXXI, No. 3, Fall 1961, NSPB.

Sloan, Louise L., Ph.D; Brown, Darlene J. "Reading Cards for Selection of Optical Aids for the Partially Sighted," American Journal of Ophthalmology, Vol. 55, No. 6, June 1963.

Sloan, Louise L., Ph.D; Brown, Darlene J. "Relative Merits of Headborne, Hand, and Stand Magnifiers," American Journal of Ophthalmology, Vol. 58, No. 4, October 1964.

Sloan, Louise L., Ph.D; Jablonski, Maria, FBOA. "Reading Aids for the Partially Blind," AMA Archives of Ophthalmology, Vol. 62, pp 465-484, September 1959.

Sloane, Albert E., M.D. "Limited Vision," Sight Saving Review, Vol. XXX, No. 3, pp 150-152, Fall 1960.

"Standards for Low Vision Aids Facilities," Approved by the Committee on Low Vision Aids, National Society for the Prevention of Blindness, p 404. Publication, NSPB, June 1962.

"Standards for Low Vision Aids Facilities," The Sight Saving Review, Vol. XXXII, No. 3, NSPB.

Stimson, Russell. "Optical Aids for Low Acuity." Braille Institute, 1957.

Weiss, Sidney, M.D. "Indications for Optical Aids in Subnormal Vision," Reprinted from Eye, Ear, Nose, Throat, Monthly 43, pp 43-47, January 1964.

Weiss, Sidney, M.D. "Optical Aids for the Partially Sighted," Reprinted from American Journal of Ophthalmology, Vol. 55, No. 2, February 1963.

Weiss, Sidney, M.D. and Moore, Edythe K. "Low Vision Rehabilitation Center Serves in Wide Area," The Sight Saving Review, Vol. XXX, No. 4, Winter 1960.

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(1967)

DATE	ISSUED TO
~~11-13-75~~	~~Virginia De Moraes~~
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